



January 27, 2022

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020-17-08-11-0N

Environment, Climate and Parks
Environmental Stewardship Division
Environmental Approvals Branch
1007 Century Street
Winnipeg, MB R3H 0W4

Attention: Laura Pyles, A/Director

**RE: INTERIM PHOSPHOROUS REMOVAL QUARTERLY REPORT FOR OCTOBER,
NOVEMBER, DECEMBER 2021**

The City of Winnipeg is submitting a Quarterly Report for the periods of October, November, and December (fourth Quarter) of 2021 in accordance with the conditional approval of the Notice of Alteration for the North End Sewage Treatment Plant (NEWPCC).

October

In October the Interim Phosphorous Removal project was initiated with KGS and their subconsultant. A kick off meeting to introduce the project teams and managers was held. A site investigation was also conducted to review the existing facilities and background information for design (e.g. site plans and drawings) was collected.

November

After an initial review of the site and background documents, a risk and opportunities workshop was held on November 5, 2021 and a design meeting was held on November 9, 2021. At these meetings staff from the Water and Waste Department's Engineering and Wastewater Services groups reviewed concepts with the consultant to determine factors that may impact the scope, schedule and/or cost of the project. Key risks and opportunities identified include:

- The ongoing COVID pandemic, supply chain issues, and long lead times were identified as factors affecting schedule risk.
- Railway logistics for ferric chloride were identified as a risk to obtaining reliable supply, with further discussions with the City's supplier and railway delivery companies planned.
- Phosphorous removal was identified as a beneficial opportunity, as well as the reuse of process piping and pumps once biological nutrient removal was implemented.

December

A progress meeting was held on December 9, 2021 with the Water and Waste Department Engineering and Wastewater Services groups. KGS submitted their first draft of the Preliminary Design Report on December 21, 2021. The Water and Waste Department started their review of the first draft and is scheduled to return comments to KGS in late January.



As part of the Preliminary Design Report, KGS submitted their proposed project schedule which is listed in Table 1 below, under the column 'Contractual Dates'.



Table 1. Schedule of Interim Phosphorous Removal

Deliverable	Description	Contractual Dates	% Previously Reported	% Currently Complete	Originally Projected Date	Revised or Completed Date	Work Remaining
Consultant RFP	Draft, review, post for tender	N/A		100%	July 2021	July 31, 2021	Project tender documents to be finalized prior to posting
	Evaluation, Admin Report, Approvals, Award	N/A		100%	September 30 – 2021	September 28, 2021	Complete, awarded
Preliminary Design (PD)	PD plus reviews and approval by WWD	February 3, 2022	0%	75%	March 31 – 2022		City review and comments of first draft, KGS revision and final submittal
Detailed Design (DD)	DD plus reviews and approval by WWD	May 18, 2022		0%	June 30 – 2022		
Construction Tender	Draft, review, post for tender	May 26, 2022		0%	June 30 – 2022		
	Tender posting period	May 26 to June 23, 2022		0%	June 30 – 2022		
	Award Recommendation, Admin Report, Approvals, Award	July 15, 2022		0%	June 30 – 2022		
Construction and Commissioning	Substantial Performance	July 20, 2023		0%	June 30 – 2023		
	Total Performance	August 31, 2023		0%	September 30 – 2023		
	Warranty Period	August 31, 2024		0%	December 31 – 2024		



Deliverable	Description	Contractual Dates	% Previously Reported	% Currently Complete	Originally Projected Date	Revised or Completed Date	Work Remaining
Full Scale Testing and Implementation	Process review, dosing estimates, trouble shooting, optimization	August 31, 2024		0%	December 31 – 2024		
Closeout	Certificate of Acceptance	September 2, 2024		0%	December 31 – 2024		

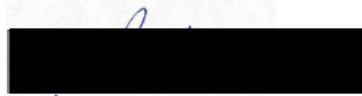
Phosphorous Optimization in Sequencing Batch Reactors

The NEWPCC Operators have maximized ferric dosing to the SBRs based on the existing ferric chloride pumping capacity. The average effluent phosphorous load for 2021 was 41.2 kg/day and corresponds with an average effluent concentration of 19.2 mg/L. This is less than the 119 kg/d licence limit specified in Clause 27 of the NEWPCC Licence No. 2684RRR.

The Preliminary Design draft report did not recommend additional dosing into the SBRs, as this could negatively impact the treatment system (e.g. nitrogen/ammonia removal). Instead, the first draft of the preliminary design report recommended additional ferric chloride dosing points upstream of the SBRs. This is currently being reviewed as part of the City's Preliminary Design review.

Should you have any questions on this report, please contact Michelle Paetkau at 204-986-4904 or by email at mpaetkau@winnipeg.ca.

Sincerely,

A black rectangular redaction box covering the signature of Michelle Paetkau.

Michelle Paetkau, P. Eng.
A/Branch Head of Wastewater Planning and Project Delivery

Attachment

MP/dr

- c:
- Siobhan Burland Ross, M. Eng., P. Eng., Manitoba Conservation and Climate (email)
 - Yvonne Hawryliuk, MSc, Manitoba Conservation and Climate (email)
 - M.L. Geer, CPA, CA, Water and Waste Department (email)
 - C. D. Wiebe, P. Eng., CAMP, Water and Waste Department (email)
 - C. Carrol; P. Eng., Water and Waste Department (email)
 - R. Grosselle, Water and Waste Department (email)
 - C. Javra, P. Eng., Water and Waste Department (email)
 - M. Paetkau, P.Eng., Water and Waste Department (email)